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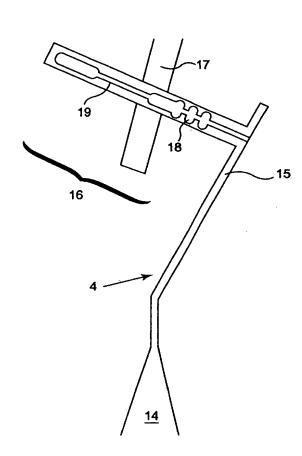
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[Continued on next page]

(54) Title: SUB-MILLIMETRE WAVELENGTH CAMERA



(57) Abstract: The invention relates to an imaging device to be used with millimeter and/or sub-millimeter radiation comprising at least a pair of substrates, at least one of which is patterned on at least one surface with a patterning defining at least one radiation detector (4), each radiation detector comprising:- an antenna (14) adapted to receive millimetre and/or sub-millimeter electromagnetic radiation, - a mixer channel (16) coupled to said antenna and in communication with a via extending through a substrate for connection to a signal output, a mixer comprising filters (15, 19) being mounted in the mixer channel for extracting an intermediate frequency signal in dependence upon said radiation received by the antenna. - a waveguide structure (17) coupled to said mixer and having a signal input for connection to a local oscillator.



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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01Q21/06 H01Q13/02 H01P3/12 H01P11/00 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 H010 H01P H01L Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the International search (name of data base and, where practical, search terms used) EPO-Internal C. DOCUMENTS CONSIDERED TO BE RELEVANT Category Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. WO 98 42486 A (UNIV VIRGINIA ; CROWE THOMAS Y 1-3,5,6W (US); KOH PHILIP J (US); WEIKLE ROBE) 1 October 1998 (1998-10-01) abstract page 8, line 3 -page 9, line 8 page 13, paragraph 2ND Α figure 2A 4,7-14 Y US 6 229 411 B1 (MANN CHRISTOPHER) 1-3,5.68 May 2001 (2001-05-08) abstract column 3, line 46 -column 4, line 23 A figure 2 4,7-14Further documents are listed in the continuation of box C. Patent family members are listed in annex. X Special categories of cited documents : "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) involve an inventive step when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled "O" document referring to an oral disclosure, use, exhibition or other means in the art. document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 23 February 2004 23/04/2004 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Fax: (+31-70) 340-3016

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